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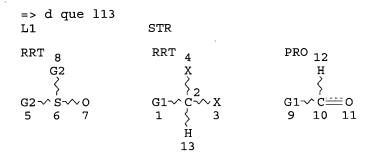
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FILE CONTENT: 1840 - 19 Jun 2005 VOL 142 ISS 25

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This file contains CAS Registry Numbers for easy and accurate substance identification.



VAR G1=AK/CY
VAR G2=AK/CY
NODE ATTRIBUTES:
CONNECT IS E3 RC AT 6
CONNECT IS E1 RC AT 7
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

****MAPPINGS***

NOD	SYM	ROL	NOD	SYM	ROL
2	C	RRT	. 10	С	PRO
10	C	PRO	2	C	RRT

L11 2583 SEA FILE=CASREACT ABB=ON PLU=ON ALDEHYDE/FG.PRO (L) (SULFOXID

E/FG.RCT OR SULFOXIDE/FG.RGT)

12 SEA FILE=CASREACT SUB=L11 SSS FUL L1 (130 REACTIONS)

=> d l13 ibib abs crd 1-12

L13 ANSWER 1 OF 12 CASREACT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 139:164928 CASREACT

TITLE: Synthesis and biological evaluation of novel

leucomycin analogues modified at the C-3 position. I. Epimerization and methylation of the 3-hydroxyl group

AUTHOR(S): Furuuchi, Takeshi; Kurihara, Ken-Ichi; Yoshida,

Takuji; Ajito, Keiichi

CORPORATE SOURCE: Pharmaceutical Research Center, Meiji Seika Kaisha,

Ltd., Yokohama, 222-8567, Japan

SOURCE: Journal of Antibiotics (2003), 56(4), 399-414

CODEN: JANTAJ; ISSN: 0021-8820

PUBLISHER: Japan Antibiotics Research Association

DOCUMENT TYPE: Journal LANGUAGE: English

GΙ

L13

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB. The synthesis and biol. evaluation of sixteen-membered macrolides modified at the C-3 position are described. 3-Epi-leucomycin A7, 3-O-acyl-3-epi-leucomycin A7 analogs, 3-O-acylleucomycin A7 analogs and 3-O-methylleucomycin analogs were synthesized via fully protected intermediates. After appropriate modification, subsequent deprotections were performed to furnish a variety of leucomycin analogs. Methylation of the 3-hydroxyl group was found to improve the pharmacoprofile of leucomycin antibiotics. 3-O-Methylrokitamycin (I) showed enhanced antibacterial activity in vitro and 3,3''-di-O-methyl-4''-O-(3-methylbutyl)leucomycin V (II) exhibited improved metabolic stability in rat plasma in vitro.

- RX(111) OF 182 REACTION DIAGRAM NOT AVAILABLE
- RX(112) OF 182 REACTION DIAGRAM NOT AVAILABLE
- RX(113) OF 182 REACTION DIAGRAM NOT AVAILABLE
- RX(114) OF 182 REACTION DIAGRAM NOT AVAILABLE
- RX(115) OF 182 REACTION DIAGRAM NOT AVAILABLE
- RX(116) OF 182 REACTION DIAGRAM NOT AVAILABLE
- RX(123) OF 182 REACTION DIAGRAM NOT AVAILABLE
- RX(130) OF 182 REACTION DIAGRAM NOT AVAILABLE
- RX(137) OF 182 REACTION DIAGRAM NOT AVAILABLE
- RX(139) OF 182 REACTION DIAGRAM NOT AVAILABLE

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RX(140) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(141) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(142) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(143) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(144) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(145) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(146) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(147) OF 182 - REACTION DIAGRAM NOT AVAILABLE
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RX(149) OF 182 - REACTION DIAGRAM NOT AVAILABLE
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RX(154) OF 182 - REACTION DIAGRAM NOT AVAILABLE
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RX(156) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(162) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(164) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(165) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(166) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(167) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(168) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(169) OF 182 - REACTION DIAGRAM NOT AVAILABLE
RX(175) OF 182 - REACTION DIAGRAM NOT AVAILABLE
REFERENCE COUNT:
                         2.7
                               THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS
                               RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
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L13 ANSWER 2 OF 12 CASREACT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

137:338079 CASREACT

TITLE:

Conformationally constrained analogues of diacylglycerol (DAG). Part 19: Asymmetric syntheses of (3R) - and (3S) -3-hydroxy-4,4-disubstituted

heptono-1,4-lactones as protein kinase C (PK-C)

ligands with increased hydrophilicity

AUTHOR(S): Nacro, Kassoum; Lee, Jeewoo; Barchi, Joseph J.; Lewin,

Nancy E.; Blumberg, Peter M.; Marquez, Victor E. Center for Cancer Research, Laboratory of Medicinal Chemistry, National Cancer Institute at Frederick,

Englander MD 21702 HCA

Frederick, MD, 21702, USA

SOURCE: Tetrahedron (2002), 58(26), 5335-5345

CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: . Elsevier Science Ltd.

DOCUMENT TYPE: Journal LANGUAGE: English

CORPORATE SOURCE:

The stereospecific introduction of (R)- and (S)-OH groups at position C-3 of two diacylglycerol γ -lactones (DAG-lactones) previously identified as strong protein kinase C (PK-C) ligands is presented. The compds. were designed to investigate whether the extra OH group in a specific orientation could establish an addnl. hydrogen bond with the C1 domain of PK-C, thus providing a DAG analog with reduced lipophilicity. The OH groups were introduced following two different diastereoselective multistep syntheses starting from diacetone-d-glucose. The PK-C binding affinities for the new compds. were weaker in comparison to those of the parent compds., suggesting that the extra OH does not engage efficiently in hydrogen bonding at the receptor.

RX(163) OF 213 - 6 STEPS

Me H Me-
$$(CH_2)_{13}$$
- P^+Ph_3
Me H Ph Br-

NOTE: 3) other product also detected, second anomer was not characterized, yield of second anomer was 23%, 4) Swern oxidation

RX(164) OF 213 - 7 STEPS

NOTE: 4) other product also detected, second anomer was not characterized, yield of second anomer was 23%, 5) Swern oxidation

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -AVAILABLE VIA OFFLINE PRINT *
- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT * REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 12 CASREACT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

132:137730 CASREACT

TITLE:

Preparation of derivatized resins useful for solid-phase peptide synthesis, combinatorial

chemistry, and peptide or protein purification and

separation

INVENTOR(S):

Siev, Daniel V.; Semple, J. Edward; Weinhouse, Michael

I.

PATENT ASSIGNEE(S):

Corvas International Inc., USA

SOURCE:

PCT Int. Appl., 96 pp. CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000005243	A2	20000203	WO 1999-US16828	19990723
WO 2000005243	A3	20000420		

W: JP

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,

PT, SE

Methods for

US 6787612 B1 20040907 US 1998-122576 19980724 EP 1100812 A2 20010523 EP 1999-935908 19990723

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

JP 2002521385 T2 20020716 PRIORITY APPLN. INFO.:

JP 2000-561199 19990723 US 1998-122576 19980724 WO 1999-US16828 19990723

This invention provides a method for producing a derivatized resin of formula R4NH(C:X)Y-Z-SS [R4 = (un)protected NH2 or OH; X = O, S, NR7; R7 = H, alkyl, alkenyl, aryl, aralkyl, cycloalkyl, heterocyclyl; Y = absent, NH, CH2; Z = absent, NH, O, CO, S, SO2, alkyl, alkenyl, aryl, aralkyl, cycloalkyl, heterocyclyl, and combinations thereof, with provisos; SS = solid support], useful in the arts of solid-phase peptide synthesis, combinatorial chemical, and peptide or protein purification and separation

synthesizing the derivatized resin, the prototypical example of which is hydrazyl-carbonyl-aminomethylated polystyrene (HCAM resin), are disclosed. Thus, aminomethylated polystyrene was coupled with t-Bu carbazate using 1,1-carbonyldiimidazole in DMF and deprotected with DCM/TFA to give HCAM resin. Alternatively, HCAM resin was also prepared by coupling of hydrazine to aminomethylated polystyrene using 1,1-carbonyldiimidazole in DMF. Reaction of an aldehyde or ketoamide with the free amino group of the resin results in an immobilized product, through a semicarbazone moiety, which can be manipulated using standard solid-phase peptide synthetic methods. As opposed to known methods for peptide aldehyde or ketoamide synthesis, the process of this invention provides, among other benefits, a method of solid-phase peptide or peptide analog synthesis that minimizes the amount of solution phase synthetic steps required.

RX(22) OF 249

$$H_2C$$
 H_2C
 H_2C

- 1. Cl2CHCO2H, EDAP, DMSO, CH2Cl2
- 2. Water
- 3. Et20

RX(22) OF 249

$$H_2C$$
 H_2C
 H_2C
 H_1
 H_2C
 H_2C
 H_1
 H_2C
 H_1
 H_2C
 H_1
 H_2
 H_2
 H_2
 H_3
 H_4
 H_5
 H_5
 H_5
 H_7
 H_7

NOTE: STEREOSELECTIVE

RX(38) OF 249 - 2 STEPS

$$H_2C$$
 H_2C
 H_2C
 H_2C
 H_1
 H_2C
 H_2C
 H_1
 H_2C
 H_1
 H_2C
 H_1
 H_2
 H_2
 H_2
 H_2
 H_3
 H_4
 H_4
 H_5
 $H_$

1.1. Et3N, ClCO2Bu-i, THF

1.2. Pyridine

1.3. Water

1.4. HCl

1.5. AcOEt

2.1. Cl2CHCO2H, EDAP, DMSO, CH2Cl2

2.2. Water

2.3. Et20

RX(38) OF 249 - 2 STEPS

$$H_2C$$
 H_2C
 H_2C
 H_1
 H_2C
 H_2C
 H_1
 H_2C
 H_2
 H_1
 H_2C
 H_2
 H_3
 H_4
 H_4
 H_5
 H_5
 H_7
 H_7

NOTE: 1) STEREOSELECTIVE, 2) STEREOSELECTIVE

RX(163) OF 249 - 6 STEPS

$$H_2C$$
 H_2C
 H_2C

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & &$$

RX(163) OF 249 - 6 STEPS

NOTE: 1) STEREOSELECTIVE, 2) RESIN SUPPORTED REACTION, 3) RESIN SUPPORTED REACTION, 4) RESIN SUPPORTED REACTION, 5) RESIN SUPPORTED REACTION

RX(164) OF 249 - 7 STEPS

$$H_2C$$
 H_2C
 H_2C
 H_2C
 H_2C
 H_2C
 H_2C
 H_2C
 H_2C
 H_3
 H_4
 H_4
 H_5
 H_5
 H_5
 H_5
 H_5
 H_6
 H_7
 H_7
 H_7
 H_7
 H_8
 H_8
 H_9
 H

$$Ph \longrightarrow 0 \qquad N \qquad CO_2H \qquad \longrightarrow$$

RX(164) OF 249 - 7 STEPS

NOTE: 1) STEREOSELECTIVE, 2) STEREOSELECTIVE, 3) RESIN SUPPORTED REACTION, 4) RESIN SUPPORTED REACTION, 5) RESIN SUPPORTED REACTION, 6) RESIN SUPPORTED REACTION, 7) RESIN SUPPORTED REACTION

RX(206) OF 249 - 7 STEPS

$$H_2C$$
 H_2C
 H_2C
 H_1
 H_2C
 H_1
 H_2C
 H_1
 H_2
 H_2
 H_2
 H_3
 H_4
 H_4
 H_5
 H_5
 H_5
 H_5
 H_7
 H_7

$$H_2C$$
 H_2C
 H_1
 H_2C
 H_2C
 H_1
 H_2C
 H_1
 H_2C
 H_1
 H_2C
 H_1
 H_2
 H_2

RX(206) OF 249 - 7 STEPS

NOTE: RESIN SUPPORTED REACTION, STEREOSELECTIVE

RX(208) OF 249 - 7 STEPS

$$H_2C$$
 H_2C
 H_2C

$$H_2C$$
 H_2C
 H_2C

RX(208) OF 249 - 7 STEPS

NOTE: RESIN SUPPORTED REACTION, STEREOSELECTIVE

RX(210) OF 249 - 8 STEPS

$$H_2C$$
 H_2C
 H_2C

$$H_2$$
C H_2 C H_2 C H_2 C H_3 C H_4 C H_2 C H_4 C H_5 C

RX(210) OF 249 - 8 STEPS

NOTE: RESIN SUPPORTED REACTION, STEREOSELECTIVE

RX(212) OF 249 - 8 STEPS

$$H_2$$
C H_2 C H_2 C H_2 C H_2 C H_2 C H_2 C H_3 C H_4 C H_2 C H_4 C H_5 C

RX(212) OF 249 - 8 STEPS

NOTE: STEREOSELECTIVE, STEREOSELECTIVE, RESIN SUPPORTED REACTION, RESIN SUPPORTED REACTION, RESIN SUPPORTED REACTION, RESIN SUPPORTED REACTION

RX(214) OF 249 - 8 STEPS

$$H_2C$$
 H_2C
 H_2C

RX(214) OF 249 - 8 STEPS

NOTE: STEREOSELECTIVE, STEREOSELECTIVE, RESIN SUPPORTED REACTION, RESIN SUPPORTED REACTION, RESIN SUPPORTED REACTION, RESIN SUPPORTED REACTION, RESIN SUPPORTED REACTION

RX(224) OF 249 - 9 STEPS

$$H_2C$$
 H_2C
 H_1
 H_2C
 H_2C
 H_1
 H_2C
 H_2C
 H_1
 H_2C
 H_2C
 H_1
 H_2C
 H_1
 H_2C
 H_1
 H_2C
 H_1
 H_2C
 H_1
 H_2
 H_2
 H_2
 H_2
 H_2
 H_2
 H_2
 H_2
 H_2
 H_3
 H_4
 H_4
 H_5
 H_5
 H_5
 H_6
 H_7
 H_7

$$H_2$$
C H_2 C H_2 C H_2 C H_2 C H_3 C H_4 C H_2 C H_4 C H_5 C

RX(224) OF 249 - 9 STEPS

NOTE: RESIN SUPPORTED REACTION, STEREOSELECTIVE, STEREOSELECTIVE

L13 ANSWER 4 OF 12 CASREACT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 13

132:12488 CASREACT

TITLE:

Synthesis of isotopically labelled L-phenylalanine and

L-tyrosine

AUTHOR(S):

Raap, Jan; Nieuwenhuis, Saskia; Creemers, Alain;

Hexspoor, Sander; Kragl, Udo; Lugtenburg, Johan

CORPORATE SOURCE:

Institute Chemistry, Leiden Univ., Leiden, 2300 RA,

 ${\tt Neth.}$

SOURCE:

European Journal of Organic Chemistry (1999), (10),

2609-2621

CODEN: EJOCFK; ISSN: 1434-193X

PUBLISHER:

Wiley-VCH Verlag GmbH

DOCUMENT TYPE:

Journal

LANGUAGE:

English

A synthetic route to stable-isotope-substituted L-phenylalanine is AΒ presented, which allows the introduction of 13C, 15N, and D labels at any position or combination of positions. For labeling of the aromatic ring, a synthetic route to PhCO2Et or PhCN was developed, based on the electrocyclic ring-closure of a 1,6-disubstituted hexatriene, with in-situ aromatization by elimination of 1 NH2 substituent. Several important, highly isotopically enriched synthons were prepared, namely PhCN, PhCHO, PhCO2Et, and (PhO)2CHCO2Et. Labeled L-phenylalanines were synthesized from both aromatic precursors by initial conversion into PhCH2COCO2Na and subsequent transformation into the $L-\alpha$ -amino acid by an enzymic reductive amination. In this manner, highly enriched phenylalanines are obtained on the 10-g scale and with ≥99% ee. The method was validated by the synthesis of [1'-13C]-L-Phe and [2-D]-L-Phe. Addnl., 2 methods are described for the introduction of isotopes into L-tyrosine starting from isotopically enriched PhCN and PhCO2Et.

RX(112) OF 162 - 6 STEPS

1.1. PhOH

3.4. EtO2CCH2P(O)(OEt)2 5.4. EtO2CCH2P(O)(OEt)2

988

REFERENCE COUNT:

THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS 35 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

CASREACT COPYRIGHT 2005 ACS on STN L13 ANSWER 5 OF 12

ACCESSION NUMBER:

123:56456 CASREACT

TITLE:

Synthesis of (+)-Zaragozic Acid C

AUTHOR (S): CORPORATE SOURCE: Carreira, Erick M.; Du Bois, J. Arnold and Mabel Beckman Laboratory for Chemical

Synthesis, California Institute of Technology,

Pasadena, CA, 91125, USA

SOURCE:

Journal of the American Chemical Society (1994),

116(23), 10825-6

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE:

LANGUAGE:

Journal English

GI

HO
$$\sim$$
 OHC (CH₂) \sim Ph \sim Ph \sim OPiv II

AB The asym. synthesis of the potent squalene synthetase inhibitor zaragozic acid C is described. The synthesis permits the preparation of multigram quantities of the dioxabicyclooctane core from the commercially available D-erythronic γ -lactone I. Coupling of the fully functionalized heptanal side chain II with lithium acetylide fragment III imparts convergency and flexibility to the synthesis.

RX(192) OF 473 - 8 STEPS

RX(192) OF 473 - 8 STEPS

NOTE: 1) Swern oxidn., in-situ generated reagent, 2) stereoselective,

6) regioselective, 7) chemoselective

RX(313) OF 473 - 9 STEPS

RX(313) OF 473 - 9 STEPS

NOTE: 2) Swern oxidn., in-situ generated reagent, 3) stereoselective,

7) regioselective, 8) chemoselective

RX(314) OF 473 - 10 STEPS

- 1. Pivaloyl chloride
- 4. Me3SiC2Li
- 7. Ac20

RX(314) OF 473 - 10 STEPS

- NOTE: 3) Swern oxidn., in-situ generated reagent, 4) stereoselective, 8) regioselective, 9) chemoselective

RX(315) OF 473 - 11 STEPS

NOTE: 1) regioselective, 4) Swern oxidn., in-situ generated reagent, 5) stereoselective, 9) regioselective, 10) chemoselective

RX(316) OF 473 - 12 STEPS

2. t-BuSiMe2Cl

3. Pivaloyl chloride

6. Me3SiC2Li

9. Ac20

AcO
$$(CH_2)_3$$
 Me AcO CHO CHO CHO OH Me Me H_2C OH OH

OAc

NOTE: 1) stereoselective, 2) regioselective, 5) Swern oxidn., in-situ generated reagent, 6) stereoselective, 10) regioselective, 11) chemoselective

RX (317) OF 473 - 13 STEPS

RX(317) OF 473 - 13 STEPS

NOTE: 2) stereoselective, 3) regioselective, 6) Swern oxidn., in-situ generated reagent, 7) stereoselective, 11) regioselective, 12) chemoselective

RX(318) OF 473 - 14 STEPS

$$\begin{array}{c} \text{T-Bu} \\ \text{Ph} \\ \text{Me} \\ \text{Me} \\ \text{Me} \\ \text{Si} \\ \text{Me} \\ \text{Si} \\ \text{Me} \\ \text{Bu-t} \\ \end{array}$$

4. t-BuSiMe2Cl

5. Pivaloyl chloride

8. Me3SiC2Li

11. Ac20

RX(318) OF 473 - 14 STEPS

NOTE: 1) stereoselective, chemoselective, 3) stereoselective, 4) regioselective, 7) Swern oxidn., in-situ generated reagent, 8) stereoselective, 12) regioselective, 13) chemoselective

RX(319) OF 473 - 15 STEPS

NOTE: 2) stereoselective, chemoselective, 4) stereoselective, 5) regioselective, 8) Swern oxidn., in-situ generated reagent, 9) stereoselective, 13) regioselective, 14) chemoselective

RX(320) OF 473 - 16 STEPS

NOTE: 3) stereoselective, chemoselective, 5) stereoselective, 6) regioselective, 9) Swern oxidn., in-situ generated reagent, 10) stereoselective, 14) regioselective, 15) chemoselective

RX(339) OF 473 - 11 STEPS

NOTE: 1) Swern oxidn., in-situ generated reagent, 2) stereoselective, 6) regioselective, 7) chemoselective, 9) buffered soln.

RX(340) OF 473 - 12 STEPS

 $\frac{3. \text{ Me3SiC2Li}}{6. \text{ Ac2O}}$

RX(340) OF 473 - 12 STEPS

NOTE: 2) Swern oxidn., in-situ generated reagent, 3) stereoselective, 7) regioselective, 8) chemoselective, 10) buffered soln.

RX(341) OF 473 - 13 STEPS

- 1. Pivaloyl chloride
- 4. Me3SiC2Li
- 7. Ac20

RX(341) OF 473 - 13 STEPS

NOTE: 3) Swern oxidn., in-situ generated reagent, 4) stereoselective, 8) regioselective, 9) chemoselective, 11) buffered soln.

RX(342) OF 473 - 14 STEPS

NOTE: 1) regioselective, 4) Swern oxidn., in-situ generated reagent, 5) stereoselective, 9) regioselective, 10) chemoselective, 12) buffered soln.

RX(343) OF 473 - 15 STEPS

NOTE: 1) stereoselective, 2) regioselective, 5) Swern oxidn., in-situ generated reagent, 6) stereoselective, 10) regioselective, 11) chemoselective, 13) buffered soln.

RX(344) OF 473 - 16 STEPS

- t-BuSiMe2Cl
- 4. Pivaloyl chloride
- 7. Me3SiC2Li
- 10. Ac20

RX(344) OF 473 - 16 STEPS

NOTE: 2) stereoselective, 3) regioselective, 6) Swern oxidn., in-situ generated reagent, 7) stereoselective, 11) regioselective, 12) chemoselective, 14) buffered soln.

RX(357) OF 473 - 13 STEPS

RX(357) OF 473 - 13 STEPS

NOTE: 1) Swern oxidn., in-situ generated reagent, 2) stereoselective, 6) regioselective, 7) chemoselective, 9) buffered soln., 12) buffered soln.

RX (358) OF 473 - 14 STEPS

RX(358) OF 473 - 14 STEPS

NOTE: 2) Swern oxidn., in-situ generated reagent, 3) stereoselective, 7) regioselective, 8) chemoselective, 10) buffered soln., 13) buffered soln.

RX(359) OF 473 - 15 STEPS

- NHPr-i | t-BuO-C==N-Pr-i (step 14.2)
- 1. Pivaloyl chloride
 4. Me3SiC2Li
 7. Ac20

RX(359) OF 473 - 15 STEPS

97%

NOTE: 3) Swern oxidn., in-situ generated reagent, 4) stereoselective, 8) regioselective, 9) chemoselective, 11) buffered soln., 14) buffered soln.

RX(360) OF 473 - 16 STEPS

NOTE: 1) regioselective, 4) Swern oxidn., in-situ generated reagent, 5) stereoselective, 9) regioselective, 10) chemoselective, 12) buffered soln., 15) buffered soln.

RX(414) OF 473 - 17 STEPS

NOTE: 1) regioselective, scalable, 4) stereoselective, chemoselective, 6) stereoselective, 7) regioselective, 10) Swern oxidn., in-situ generated reagent, 11) stereoselective, 15) regioselective, 16) chemoselective

RX(415) OF 473 - 18 STEPS

Aco CHO 12. Me3SiC2Li 15. Ac20 OH

Me Me

94%

H₂C

NOTE: 1) chemoselective (stage 1), 2) regioselective, scalable, 5) stereoselective, chemoselective, 7) stereoselective, 8) regioselective, 11) Swern oxidn., in-situ generated reagent, 12) stereoselective, 16) regioselective, 17) chemoselective

RX(416) OF 473 - 19 STEPS

- 3.1. t-BuSiMe2Cl
- 3.2. Me3SiCl
- 9. t-BuSiMe2Cl
- 10. Pivaloyl chloride
- 13. Me3SiC2Li
- 16. Ac20

OAc

NOTE: 2) chemoselective (stage 1), 3) regioselective, scalable, 6) stereoselective, chemoselective, 8) stereoselective, 9) regioselective, 12) Swern oxidn., in-situ generated reagent, 13) stereoselective, 17) regioselective, 18) chemoselective

RX(417) OF 473 - 20 STEPS

RX(417) OF 473 - 20 STEPS

NOTE: 1) stereoselective, 3) chemoselective (stage 1), 4) regioselective, scalable, 7) stereoselective, chemoselective, 9) stereoselective, 10) regioselective, 13) Swern oxidn., in-situ generated reagent, 14) stereoselective, 18) regioselective, 19) chemoselective

RX(418) OF 473 - 21 STEPS

Me₂N
$$\rightarrow$$
 Et \rightarrow Me₃Si-C=C-Mg-Br \rightarrow (step 2.2)

RX(418) OF 473 - 21 STEPS

NOTE: 2) stereoselective, 4) chemoselective (stage 1), 5) regioselective, scalable, 8) stereoselective, chemoselective, 10) stereoselective, 11) regioselective, 14) Swern oxidn., in-situ generated reagent, 15) stereoselective, 19) regioselective, 20) chemoselective

RX(419) OF 473 - 22 STEPS

RX(419) OF 473 - 22 STEPS

NOTE: 1) regioselective, acidic conditions, 3) stereoselective, 5) chemoselective (stage 1), 6) regioselective, scalable, 9) stereoselective, chemoselective, 11) stereoselective, 12) regioselective, 15) Swern oxidn., in-situ generated reagent, 16) stereoselective, 20) regioselective, 21) chemoselective

RX(420) OF 473 - 23 STEPS

RX(420) OF 473 - 23 STEPS

NOTE: 2) regioselective, acidic conditions, 4) stereoselective, 6) chemoselective (stage 1), 7) regioselective, scalable, 10) stereoselective, chemoselective, 12) stereoselective, 13) regioselective, 16) Swern oxidn., in-situ generated reagent, 17) stereoselective, 21) regioselective, 22) chemoselective

RX(438) OF 473 - 17 STEPS

- 4. t-BuSiMe2Cl
- 5. Pivaloyl chloride
- 8. Me3SiC2Li
- 11. Ac20

RX(438) OF 473 - 17 STEPS

NOTE: 1) stereoselective, chemoselective, 3) stereoselective, 4) regioselective, 7) Swern oxidn., in-situ generated reagent, 8) stereoselective, 12) regioselective, 13) chemoselective, 15) buffered soln.

RX(439) OF 473 - 18 STEPS

RX(439) OF 473 - 18 STEPS

NOTE: 2) stereoselective, chemoselective, 4) stereoselective, 5) regioselective, 8) Swern oxidn., in-situ generated reagent, 9) stereoselective, 13) regioselective, 14) chemoselective, 16) buffered soln.

RX(440) OF 473 - 19 STEPS

NHPr-i 6. t-BuSiMe2Cl t-BuO-C=N-Pr-i 7. Pivaloyl chloride 10. Me3SiC2Li (step 17.2) 13. Ac2O RX(440) OF 473 - 19 STEPS

NOTE: 3) stereoselective, chemoselective, 5) stereoselective, 6) regioselective, 9) Swern oxidn., in-situ generated reagent, 10) stereoselective, 14) regioselective, 15) chemoselective, 17) buffered soln.

RX(441) OF 473 - 20 STEPS

1.1. t-BuSiMe2Cl

NHPr-i

C=N-Pr-i

(step 18.2)

1.2. Me3SiCl

7. t-BuSiMe2Cl

8. Pivaloyl chloride

11. Me3SiC2Li

14. Ac2O

RX(441) OF 473 - 20 STEPS

NOTE: 1) regioselective, scalable, 4) stereoselective, chemoselective, 6) stereoselective, 7) regioselective, 10) Swern oxidn., in-situ generated reagent, 11) stereoselective, 15) regioselective, 16) chemoselective, 18) buffered soln.

RX(442) OF 473 - 21 STEPS

2.1. t-BuSiMe2Cl
2.2. Me3SiCl
2.2. Me3SiCl
8. t-BuSiMe2Cl
9. Pivaloyl chloride
12. Me3SiC2Li
15. Ac2O

RX(442) OF 473 - 21 STEPS

NOTE: 1) chemoselective (stage 1), 2) regioselective, scalable, 5) stereoselective, chemoselective, 7) stereoselective, 8) regioselective, 11) Swern oxidn., in-situ generated reagent, 12) stereoselective, 16) regioselective, 17) chemoselective, 19) buffered soln.

RX(443) OF 473 - 22 STEPS

3.1. t-BuSiMe2Cl
3.2. Me3SiCl
9. t-BuSiMe2Cl
10. Pivaloyl chloride
13. Me3SiC2Li
16. Ac2O

RX(443) OF 473 - 22 STEPS

NOTE: 2) chemoselective (stage 1), 3) regioselective, scalable, 6) stereoselective, chemoselective, 8) stereoselective, 9) regioselective, 12) Swern oxidn., in-situ generated reagent, 13) stereoselective, 17) regioselective, 18) chemoselective, 20) buffered soln.

RX(444) OF 473 - 23 STEPS

RX(444) OF 473 - 23 STEPS

NOTE: 1) stereoselective, 3) chemoselective (stage 1), 4) regioselective, scalable, 7) stereoselective, chemoselective, 9) stereoselective, 10) regioselective, 13) Swern oxidn., in-situ generated reagent, 14) stereoselective, 18) regioselective, 19) chemoselective, 21) buffered soln.

RX(445) OF 473 - 24 STEPS

RX(445) OF 473 - 24 STEPS

NOTE: 2) stereoselective, 4) chemoselective (stage 1), 5) regioselective, scalable, 8) stereoselective, chemoselective, 10) stereoselective, 11) regioselective, 14) Swern oxidn., in-situ generated reagent, 15) stereoselective, 19) regioselective, 20) chemoselective, 22) buffered soln.

RX(446) OF 473 - 25 STEPS

NOTE: 1) regioselective, acidic conditions, 3) stereoselective, 5) chemoselective (stage 1), 6) regioselective, scalable, 9) stereoselective, chemoselective, 11) stereoselective, 12) regioselective, 15) Swern oxidn., in-situ generated reagent, 16) stereoselective, 20) regioselective, 21) chemoselective, 23) buffered soln.

(step 2)

RX(447) OF 473 - 26 STEPS

NOTE: 2) regioselective, acidic conditions, 4) stereoselective, 6) chemoselective (stage 1), 7) regioselective, scalable, 10) stereoselective, chemoselective, 12) stereoselective, 13) regioselective, 16) Swern oxidn., in-situ generated reagent, 17) stereoselective, 21) regioselective, 22) chemoselective, 24) buffered soln.

RX(459) OF 473 - 17 STEPS

- 2. t-BuSiMe2Cl
- 3. Pivaloyl chloride
- 6. Me3SiC2Li
- 9. Ac20

RX(459) OF 473 - 17 STEPS

NOTE: 1) stereoselective, 2) regioselective, 5) Swern oxidn., in-situ generated reagent, 6) stereoselective, 10) regioselective, 11) chemoselective, 13) buffered soln., 16) buffered soln.

RX(460) OF 473 - 18 STEPS

$$\begin{array}{c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

NHPr-i 3. t-BuSiMe2Cl t-BuO-C=N-Pr-i 4. Pivaloyl chloride 7. Me3SiC2Li (step 17.2) 10. Ac2O RX(460) OF 473 - 18 STEPS

NOTE: 2) stereoselective, 3) regioselective, 6) Swern oxidn., in-situ generated reagent, 7) stereoselective, 11) regioselective, 12) chemoselective, 14) buffered soln., 17) buffered soln.

RX(461) OF 473 - 19 STEPS

4. t-BuSiMe2Cl

5. Pivaloyl chloride

8. Me3SiC2Li

11. Ac2O

RX(461) OF 473 - 19 STEPS

NOTE: 1) stereoselective, chemoselective, 3) stereoselective, 4) regioselective, 7) Swern oxidn., in-situ generated reagent, 8) stereoselective, 12) regioselective, 13) chemoselective, 15) buffered soln., 18) buffered soln.

RX(462) OF 473 - 20 STEPS

RX(462) OF 473 - 20 STEPS

NOTE: 2) stereoselective, chemoselective, 4) stereoselective, 5) regioselective, 8) Swern oxidn., in-situ generated reagent, 9) stereoselective, 13) regioselective, 14) chemoselective, 16) buffered soln., 19) buffered soln.

RX(463) OF 473 - 21 STEPS

RX(463) OF 473 - 21 STEPS

NOTE: 3) stereoselective, chemoselective, 5) stereoselective, 6) regioselective, 9) Swern oxidn., in-situ generated reagent, 10) stereoselective, 14) regioselective, 15) chemoselective, 17) buffered soln., 20) buffered soln.

RX(464) OF 473 - 22 STEPS

RX(464) OF 473 - 22 STEPS

NOTE: 1) regioselective, scalable, 4) stereoselective, chemoselective, 6) stereoselective, 7) regioselective, 10) Swern oxidn., in-situ generated reagent, 11) stereoselective, 15) regioselective, 16) chemoselective, 18) buffered soln., 21) buffered soln.

RX(465) OF 473 - 23 STEPS

RX(465) OF 473 - 23 STEPS

NOTE: 1) chemoselective (stage 1), 2) regioselective, scalable, 5) stereoselective, chemoselective, 7) stereoselective, 8) regioselective, 11) Swern oxidn., in-situ generated reagent, 12) stereoselective, 16) regioselective, 17) chemoselective, 19) buffered soln., 22) buffered soln.

RX(466) OF 473 - 24 STEPS

RX (466) OF 473 - 24 STEPS

NOTE: 2) chemoselective (stage 1), 3) regioselective, scalable, 6) stereoselective, chemoselective, 8) stereoselective, 9) regioselective, 12) Swern oxidn., in-situ generated reagent, 13) stereoselective, 17) regioselective, 18) chemoselective, 20) buffered soln., 23) buffered soln.

RX(467) OF 473 - 25 STEPS

RX(467) OF 473 - 25 STEPS

NOTE: 1) stereoselective, 3) chemoselective (stage 1), 4) regioselective, scalable, 7) stereoselective, chemoselective, 9) stereoselective, 10) regioselective, 13) Swern oxidn., in-situ generated reagent, 14) stereoselective, 18) regioselective, 19) chemoselective, 21) buffered soln., 24) buffered soln.

RX(468) OF 473 - 26 STEPS

RX(468) OF 473 - 26 STEPS

978

NOTE: 2) stereoselective, 4) chemoselective (stage 1), 5) regioselective, scalable, 8) stereoselective, chemoselective, 10) stereoselective, 11) regioselective, 14) Swern oxidn., in-situ generated reagent, 15) stereoselective, 19) regioselective, 20) chemoselective, 22) buffered soln., 25) buffered soln.

RX(469) OF 473 - 27 STEPS

NOTE: 1) regioselective, acidic conditions, 3) stereoselective, 5) chemoselective (stage 1), 6) regioselective, scalable, 9) stereoselective, chemoselective, 11) stereoselective, 12) regioselective, 15) Swern oxidn., in-situ generated reagent, 16) stereoselective, 20) regioselective, 21) chemoselective, 23) buffered soln., 26) buffered soln.

OME
$$+ Et - C - Et + Me_3Si - C = C - Mg - Br + OMe$$

$$+ OMe (step 4.2)$$

$$+ OMe (step 2)$$

RX (470) OF 473 - 28 STEPS

97%

NOTE: 2) regioselective, acidic conditions, 4) stereoselective, 6) chemoselective (stage 1), 7) regioselective, scalable, 10) stereoselective, chemoselective, 12) stereoselective, 13) regioselective, 16) Swern oxidn., in-situ generated reagent, 17) stereoselective, 21) regioselective, 22) chemoselective, 24) buffered soln., 27) buffered soln.

L13 ANSWER 6 OF 12 CASREACT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

120:191277 CASREACT

TITLE:

Convenient synthesis of 1,1'-binaphthyl-2,2'-

dicarboxylic acid

AUTHOR (S):

Oi, Shuichi; Matsunaga, Kenichi; Hattori, Tetsutaro;

Miyano, Sotaro

CORPORATE SOURCE:

Fac. Eng., Tohoku Univ., Sendai, 980, Japan Synthesis (1993), (9), 895-8

SOURCE:

CODEN: SYNTBF; ISSN: 0039-7881

DOCUMENT TYPE:

Journal

LANGUAGE:

English

GΙ

AB Two syntheses of title compound I in good yields are presented via the oxidation of the 2'-Me substituent binaphthylcarboxylate II, which is readily obtainable by reaction of naphthyl Grignard III with iso-Pr 1-isopropoxy-2-naphthoate.

L13 ANSWER 7 OF 12 CASREACT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

116:193986 CASREACT

TITLE:

Synthesis of 3-vinylcephalosporins and their

1,3-dipolar cycloaddition reactions with diazo alkanes

AUTHOR(S):

Pitlik, Janos; Batta, Gyula; Sztaricskai, Ferenc;

Erdodi Kover, Katalin

CORPORATE SOURCE:

Antibiot. Kem. Kutatocsoport, MTA, Debrecen, 4010,

Hung.

SOURCE:

Magyar Kemiai Folyoirat (1991), 97(12), 493-509

CODEN: MGKFA3; ISSN: 0025-0155

DOCUMENT TYPE:

LANGUAGE:

Journal Hungarian

GI

R1CH₂CONH

R1CH₂CONH

R

$$R^{2}CH_{2}O_{2}C$$
 $R^{2}CH_{2}O_{2}C$
 $R^{2}CH_{2}O_{2}C$

AB Chromatog. inseparable mixts. of cis/trans isomers of 3vinylcephalosporins I (R = e.g., CH:CHR3 with R3 = H, Me, heteroaryl; R1 = Ph, PhO; R2 = H, vinyl) were prepared in up to 81% total yield by iodination of acetoxymethyl derivs. I (R = CH2OAc) with Me3SiI and conversion of the corresponding iodomethyl derivs to phosponium iodide Wittig reagents for subsequent olefination with R3CHO. Substituent R3 = Me favored the corresponding cis-3-vinylcephalosporin in ratio 5:1, whereas heteroaryl aldehydes resulted in predominantly trans mixts. Wittig reaction with acrolein afforded tricyclic derivative II whose 4-R configuration was established on the basis of mol. modeling calcns. Me3SiI was also applied to the reduction of cephalosporin-1S(β) sulfoxides, affording, e.g., the acetoxymethyl derivs. I (R = CH2OAc, R1 = Ph, PhO; R2 = H) in 65 and 75% yields, resp. An alternative route to 3-vinylcephalosporins involved Wittig reaction of 3-formylcephalosporins I (R = CHO), themselves prepared by DMSO/dicyclohexylcarbodiimide oxidation of the corresponding hydroxymethyl derivs. I (R = CH2OH). Regio- and stereoselective dipolar cycloaddn. reaction of CH2N2 with III (R1 = Ph) afforded the pyrazolyl β -adduct IV with S configuration at C-3' (NOE-mol. modeling determination) together with pyrazolinopyrazolylcephalosporin V. Similar regio- and stereoselectivity was observed for the reaction of III 1S(β) sulfoxide with CH2N2, affording the corresponding IV sulfoxide.

RX(10) OF 16

DMSO, R:22699-63-4, > Cl2CHCO2H, CH2Cl2

NOTE: optimization

L13 ANSWER 8 OF 12 CASREACT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

111:174558 CASREACT

TITLE:

Semisynthetic macrolide antibacterials derived from tylosin. Synthesis of 3-O-acetyl-23-O-demycinosyl-4"-O-isovaleryltylosin and related compounds, as well as

O-isovaleryltylosin and related compounds, as well as the 12,13-epoxy derivatives

AUTHOR(S):

Fishman, Andrew G.; Mallams, Alan K.; Rossman, Randall

R.

CORPORATE SOURCE:

Res. Div., Schering-Plough Corp., Bloomfield, NJ,

07003, USA

SOURCE:

Journal of the Chemical Society, Perkin Transactions

1: Organic and Bio-Organic Chemistry (1972-1999)

(1989), (4), 787-98

CODEN: JCPRB4; ISSN: 0300-922X

DOCUMENT TYPE:

LANGUAGE:

Journal English

GI

AB Selective acylation techniques have been developed that enable the synthesis of 3-0-acetyl-4''-0-isovaleryltylosin and 3-0-acetyl-23-0-demycinosyl-4''-0-isovaleryltylosin to be carried out in an efficient manner starting from tylosin (I). The 2'--0-acetyl, 23-0-acetyl, and 2',23-di-0-acetyl derivs. of the latter were also prepared, as were key hydrazones. The regio- and stereoselective epoxidn. of tylosin and its acyl derivs. afforded the 12,13-epoxy analogs, which were used to synthesize novel acylated 12,13-epoxy derivs. of 23-0-demycinosyltylosin.

Ι

RX(853) OF 862 - 5 STEPS

$$\begin{array}{c} \text{Me} \\ \text{Me} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{O$$

 $\frac{2. \text{ Ac20}}{4. \text{ Ac20}}$

RX(854) OF 862 - 6 STEPS

$$\begin{array}{c} \text{Me} \\ \text{Me} \\ \text{OH} \\ \text{Me} \\ \text{OH} \\ \text{Me} \\ \text{OH} \\ \text{Me} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{O$$

 $\frac{3. \text{ Ac2O}}{5. \text{ Ac2O}}$

RX(855) OF 862 - 7 STEPS

MULTI

4. Ac20 6. Ac20 PAGE

IMAGE

122076-92-0

RX(856) OF 862 - 8 STEPS

MULTI

1. MeOH

PAŒ

 $\frac{5. \text{ Ac20}}{7. \text{ Ac20}}$

IMAGE

63408-91-3

RX(858) OF 862 - 6 STEPS

$$\begin{array}{c} \text{Me} \\ \text{Me} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{OMe} \\ \text{OH} \\ \text{O$$

2. Ac20 4. Ac20 6. Ac20

RX(859) OF 862 - 7 STEPS

$$\begin{array}{c} \text{Me} \\ \text{Me} \\ \text{OH} \\ \text{Me} \\ \text{OH} \\ \text{Me} \\ \text{OH} \\ \text{Me} \\ \text{OH} \\$$

3. Ac20 5. Ac20 7. Ac20

RX(860) OF 862 - 8 STEPS

MULTI

4. Ac20

PAGE IMAGE

6. Ac20. 8. Ac20

122076-92-0

CASREACT COPYRIGHT 2005 ACS on STN L13 ANSWER 9 OF 12

ACCESSION NUMBER:

110:193300 CASREACT

TITLE:

Synthesis of tritium-labeled 9-deazainosine

AUTHOR (S):

Singh, Ambarish K.; Klein, Robert S.

CORPORATE SOURCE:

Lab. Org. Chem., Mem. Sloan-Kettering Cancer Cent.,

New York, NY, 10021, USA

SOURCE:

Journal of Labelled Compounds and Radiopharmaceuticals

(1988), 25(11), 1219-28

CODEN: JLCRD4; ISSN: 0362-4803

DOCUMENT TYPE:

LANGUAGE:

GΙ

via

Journal English

The synthesis of labeled 9-deazainosine I (R = 3H, 2H) from the fully AΒ blocked 9-deazainosine II is achieved in six steps by selective detritylation, oxidation of the C-5' hydroxyl group, followed by purification

its N, N'-diphenylimidazolidine derivative, deprotection to obtain the 5'-aldehyde, [3H]-NaBH4 reduction (treatment with NaBD4 to reduce unreacted aldehyde), and deisopropylidenation to give the labeled nucleoside. The sequence is of general utility in labeling nucleosides at the C-5'

position for biochem. studies.

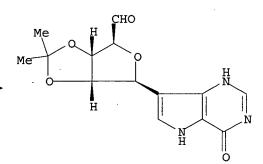
RX(27) OF 67 - 3 STEPS

- 1.1. DMSO, Cl2CHCO2H, DCC
- 1.2. MeOH
- 2. Bio-Rad AG 50W-X8, THF, Water
- 3. Benzene

RX(28) OF 67 - 4 STEPS

PhNH- CH_2 - CH_2 -NHPh(step 2.2)

- 1.1. TsOH, CH2Cl2
- 1.2. NaHCO3, Water
- 2.1. DMSO, Cl2CHCO2H, DCC
- 2.2. MeOH
- Bio-Rad AG 50W-X8, THF, Water
- 4. Benzene



L13 ANSWER 10 OF 12 CASREACT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 110:173727 CASREACT

TITLE: Approaches to isozyme-specific inhibitors. 16. A

novel methyl-C5' covalent adduct of L-ethionine and

 β, γ -imido-ATP as a potent multisubstrate

inhibitor of rat methionine adenosyltransferases
Vrudhula, Vivekananda M.; Kappler, Francis; Afshar,

Carol; Ginell, Stephan L.; Lessinger, Leslie; Hampton,

Alexander

Journal

Ι

CORPORATE SOURCE: Fox Chase Cancer Cent., Inst. Cancer Res.,

Philadelphia, PA, 19111, USA

SOURCE: Journal of Medicinal Chemistry (1989), 32(4), 885-90

CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE:

LANGUAGE: English

GI

AUTHOR(S):

N6,N6-Dibenzoyl-2',3'-O-isopropylideneadenosine, which is readily AΒ synthesized by one-pot 5'-O-trimethylsilylation, N6-benzoylation, and desilylation, was converted to the corresponding 5'-aldehyde. This was treated with CH2: CHMqBr to afford, after debenzoylation, a 1:3 mixture of the 5'S and 5'R epimers, resp., of 5'-C-vinyl-2',3'-Oisopropylideneadenosine. The configurations were established by single-crystal x-ray diffraction anal. of the 5'R epimer. Hydroboration of the 5'-O-tetrahydropyranyl derivative of the mixed epimeric 5'-C-vinyl nucleosides readily furnished 5'(S,R)-C-(2-hydroxyethyl)-2',3'-Oisopropylideneadenosine. Treatment of the 5'(S,R)-C(2-O-tosyl) derivative of this with disodium L-homocysteinate permitted facile introduction of the L-ethionine system. The α -amino acid group was protected, a β, γ -imidotriphosphoryl group was introduced at 05', and blocking groups were removed to give the title adduct I [R = (CH2)n-(L)-SCH2CH2CH(NH2)CO2H, n=2] (II), as a 2:3 mixture of its two 5' epimers. II was a powerful inhibitor [KM(ATP)/Ki = 520 and 340] of the M-2 (normal tissue) and M-T (hepatoma tissue) forms, resp., of the title enzyme and displayed predominantly competitive kinetics with the two substrates L-methionine and MgATP. II inhibited M-2 and M-T slightly less effectively than I (n = 1), and gave kinetic evidence of an increased

tendency to form L-methionine-enzyme-adduct and MgATP-enzyme-adduct complexes.

DMSO, DCC, Cl2CHCO2H, > PhMe

RX(14) OF 47 - 2 STEPS

1 2 Phroci

1.3. Water

2. DMSO, DCC,

Cl2CHCO2H, PhMe

L13 ANSWER 11 OF 12 CASREACT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

110:173659 CASREACT

TITLE:

Synthesis of [3H]-desciclovir, prodrug of the

antiviral acyclovir

AUTHOR(S):

Moorman, Allan R.; Hill, John A.

CORPORATE SOURCE:

Dep. Exp. Ther., Wellcome Res. Lab., Research Triangle

Park, NC, 27709, USA

SOURCE:

Journal of Labelled Compounds and Radiopharmaceuticals

(1988), 25(9), 963-9

CODEN: JLCRD4; ISSN: 0362-4803

DOCUMENT TYPE:

Journal

LANGUAGE:

English

Ι

GI

AB The title compound I was prepared by direct radiochem. synthesis from 2-acetylamino-9-[(2-hydroxyethoxy)methyl]-9H-purine. The product had a specific activity of 21.5 Ci mmol-1 and a radiochem. purity of 99.2%.

RX(5) OF 10 - 2 STEPS

L13 ANSWER 12 OF 12 CASREACT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

102:203790 CASREACT

TITLE:

Convergent synthesis of polyether ionophore

antibiotics: an approach to the synthesis of the monensin tetrahydropyran-bis(tetrahydrofuran) via the ester enolate Claisen rearrangement and reductive

decarboxylation

AUTHOR(S):

Ireland, Robert E.; Norbeck, Daniel W.; Mandel,

Gretchen S.; Mandel, Neil S.

CORPORATE SOURCE:

Chem. Lab., California Inst. Technol., Pasadena, CA,

91125, USA

SOURCE:

Journal of the American Chemical Society (1985),

107(11), 3285-94

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE:

Journal

LANGUAGE:

English

GI

The monensin tetrahydropyran equivalent I was prepared from D-fructose and then AB joined to the monensin bis(tetrahydrofuran) equivalent II via the ester enolate Claisen rearrangement. The radical induced, reductive decarboxylation of the resulting acid III was carried out via the phenylseleno ester. Anomeric stabilization of the intermediate tetrahydrofuran-2-yl radical is an important factor in the stereochem. outcome of this process. Reduction of 1-chloro-2,3-0-isopropylidene furanoid and pyranoid carbohydrate derivs. with lithium di-tert-butylbiphenyl affords the corresponding glycals in high yield.

RX(95) OF 631 - 4 STEPS

- Cl2CHCO2H, i-PrN:C:NPr-i, DMSO, Benzene
- 2. Ph3PMe.Br, BuLi, THF
- 3.1. BH3, THF
- 3.2. H2O2, Water
- 4.1. (COCl)2, DMSO, CH2Cl2
- 4.2. Et3N

stereoisomers

RX(182) OF 631 - 5 STEPS

RX(183) OF 631 - 6 STEPS

stereoisomers

RX(185) OF 631 - 7 STEPS

3. t-BuSiMe2Cl

5. Ph3PMe.Br

stereoisomers

RX(190) OF 631 - 5 STEPS

$$\begin{array}{c|c} \text{Me} & \text{OH} \\ \text{Me} & \text{CH-Me} \\ \text{Me} & \text{Me} \\ \text{CH}_2 - \text{O-Si-Bu-t} \\ \text{Me} \end{array}$$

2. Ph3PMe.Br

NOTE: 5) silica gel

RX(194) OF 631 - 6 STEPS

1. t-BuSiMe2Cl
3. Ph3PMe.Br

NOTE: 6) silica gel

RX(198) OF 631 - 7 STEPS

2. t-BuSiMe2Cl

4. Ph3PMe.Br

NOTE: 7) silica gel

RX(206) OF 631 - 7 STEPS

2. Ph3PMe.Br

5. Bu3SnCH2OCH2Ph

Me O
$$CH-C-CH_2-O-CH_2-Ph$$
OHC

RX(208) OF 631 - 8 STEPS

1 +-PuciMe2C1

3. Ph3PMe.Br

6. Bu3SnCH2OCH2Ph

RX(220) OF 631 - 8 STEPS

2. Ph3PMe.Br

6. Bu3SnCH2OCH2Ph

NOTE: 5) silica gel

RX(403) OF 631 - 8 STEPS

3. t-BuSiMe2Cl
5. Ph3PMe.Br

NOTE: 8) silica gel

RX(417) OF 631 - 9 STEPS

1. t-BuSiMe2Cl

3. Ph3PMe.Br

7. Bu3SnCH2OCH2Ph

NOTE: 6) silica gel

RX(419) OF 631 - 9 STEPS

2. t-BuSiMe2Cl

4. Ph3PMe.Br

7. Bu3SnCH2OCH2Ph

RX(421) OF 631 - 10 STEPS

2 t-BuSiMe2Cl

4. Ph3PMe.Br

8. Bu3SnCH2OCH2Ph

NOTE: 7) silica gel

RX(423) OF 631 - 10 STEPS

- 3. t-BuSiMe2Cl
- Ph3PMe.Br
- 8. Bu3SnCH2OCH2Ph

RX(425) OF 631 - 11 STEPS

- 3. t-BuSiMe2Cl
- 5. Ph3PMe.Br
- Bu3SnCH2OCH2Ph

NOTE: 8) silica gel

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FILE COVERS 1907 - 23 Jun 2005 VOL 142 ISS 26 FILE LAST UPDATED: 22 Jun 2005 (20050622/ED)

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substance identification.

=> d que 127 43878 SEA FILE=HCAPLUS ABB=ON PLU=ON ALDEHYDES+PFT,NT/CT(L)PREP/RL L18 L19 5539 SEA FILE=HCAPLUS ABB=ON PLU=ON SULFOXIDES+PFT, NT/CT(L)(RACT OR RGT OR RCT)/RL L20 172 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND L19 TRANSFER PLU=ON L20 1- RN: 4787 TERMS L21 L22 4787 SEA FILE=REGISTRY ABB=ON PLU=ON L21 L23 STR Х \sim CH \sim X 2 3

NODE ATTRIBUTES:

NSPEC IS RC AT 1 DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 4

STEREO ATTRIBUTES: NONE

L25 29 SEA FILE=REGISTRY SUB=L22 SSS FUL L23

L26 895 SEA FILE=HCAPLUS ABB=ON PLU=ON L25(L)(RACT OR RGT OR RCT)/RL

L27 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L20

=> d 127 ibib abs hitind hitstr 1-5

L27 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

2004:353188 HCAPLUS

DOCUMENT NUMBER:

140:375069

TITLE:

Process for making an aldehyde by oxidation of

dihalomethyl aromatic compound with a sulfoxide

INVENTOR(S):

McKew, John C.; Tam, Steven Y.; Lee, Katherine L.; Chen, Lihren; Thakker, Paresh; Sum, Fuk-Wah; Behnke,

Mark; Hu, Baihua; Clark, James D.; Li, Wei

PATENT ASSIGNEE(S):

Wyeth, John, and Brother Ltd., USA

SOURCE:

U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S.

Pat. Appl. 2003 144,282.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
~				
US 2004082785	A1	20040429	US 2003-722782	20031126
US 2003144282	A1	20030731	US 2002-302636	20021122
US 6797708	B2	20040928		
PRIORITY APPLN. INFO.:			US 2001-334588P	20011203

US 2002-302636

A2 20021122

OTHER SOURCE(S):

MARPAT 140:375069

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Disclosed is a process for making an aromatic aldehyde of formula AA-CHO (AA = aryl, alkenyl, alkynyl, in particular 2-indolyl of formula Q; R, R3, R4, R9, R10, X2, n3 are defined bellow in formula I) in which a sulfoxide is reacted with a dihalogenated aromatic compound of formula AA-CH(X)X (AA = same as above; X = F, Cl, Br, iodo) in the absence of an effective amount of an activating reagent. The aldehyde may then be used to make other compds., such as a compound [I; R = (CH2)n-A, (CH2)n-S-A, (CH2)n-O-A; A = CH(B)D, CH(B)C; D = C1-6 alkyl or alkoxy, C3-6 cycloalkyl, CF3, (CH2)1-3-CF3; B, C = each (un)substituted Ph, pyridinyl, pyrimidinyl, furanyl, thiophenyl or pyrrolyl; n, n1, n3 = 0-3; X2 = 0, CH2, S, S0, S02, CO, each (un) substituted NH, NHCO, or NHSO2, etc.; R3 = H, halogen, cyano, CHO, CF3, OCF3, OH, C1-6 alkyl, alkoxy, or alkylthio, (un)substituted NH2, NO2, etc.; R4 = H, halogen, cyano, CHO, CF3, OCF3, OH, C1-6 alkyl, alkoxy, or alkylthio, NH2, N(C1-C6 alkyl)2, NH(C1-C6 alkyl), N-C(O)-(C1-C6 alkyl), NO2, N-C(O)-N(C1-C3 alkyl)2, Ph, benzyl, benzyloxy, morpholino, etc. (each ring optionally substituted); R10 = H, C1-6 alkyl; R1 = each (un) substituted C1-6 alkyl, C1-6 fluorinated alkyl, C3-6 cycloalkyl, tetrahydropyranyl, camphoryl, adamantyl, cyano, N(C1-C6 alkyl)2, Ph, pyridinyl, pyrimidinyl, furyl, thienyl, naphthyl, morpholinyl, triazolyl, pyrazolyl, piperidinyl, pyrrolidinyl, imidazolyl, piperidinyl, thiazolidinyl, thiomorpholinyl, tetrazole, indole, benzoxazole, benzofuran, imidazolidine-2-thione, 7,7-dimethylbicyclo[2.2.1]heptan-2one, benzo[1,2,5]oxadiazole, 2-Oxa-5-azabicyclo[2.2.1]heptane, etc.; X1 = chemical bond, S, O, SO, SO2, NH, NHCO, C:C, etc.; n2 = 0-4] that acts as a cytoplasmic phospholipase A2 (cPLA2) inhibitor. Thus, bromination of 5-chloro-2-methylindole derivative (II; X = Me) by NBS in the presence of benzoyl peroxide in CCl4 under reflux for 3 h gave 2-dibromomethyl-5chloroindole derivative II (X = CHBr2) which was stirred with DMSO at room temperature for 30 min to quant. give 5-chloro-2-formylindole derivative II (X

CHO).

IC ICM C07D215-38

ICS C07D217-12

INCL 544334000; 546169000; 546146000; 546315000; 548194000; 548236000; 548248000; 568316000

CC 27-11 (Heterocyclic Compounds (One Hetero Atom))
 Section cross-reference(s): 1, 7

IT Aldehydes, preparation

RL: SPN (Synthetic preparation); **PREP** (**Preparation**) (aromatic; preparation of aromatic aldehydes by oxidation of α, α -dihaloarylmethanes with sulfoxides and conversion of indolecarboxaldehydes into N-(indolylmethyl)alkanesulfoxamides useful as cytoplasmic phospholipase A2 inhibitors)

IT Sulfoxides

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aromatic aldehydes by oxidation of α,α -dihaloarylmethanes with sulfoxides and conversion of indolecarboxaldehydes into N-(indolylmethyl)alkanesulfoxamides useful as cytoplasmic phospholipase A2 inhibitors)

IT 67-68-5, DMSO, reactions 75-52-5, Nitromethane, reactions

```
98-87-3, (Dichloromethyl) benzene 320-65-0,
     1-Dichloromethyl-2-fluorobenzene 402-64-2, 1-(Dichloromethyl)-3-
     fluorobenzene 455-34-5, 1-Dibromomethyl-3-fluorobenzene
     618-31-5, (Dibromomethyl) benzene 6425-24-7,
     1-Dibromomethyl-4-fluorobenzene 26496-95-7, 4-
     Dibromomethylbenzoic acid ethyl ester 62037-06-3,
     1-Dibromomethyl-4-chlorobenzene 62247-78-3, 1-Dibromomethyl-3-
     bromobenzene 70288-97-0, 1-Dibromomethyl-3-chlorobenzene
     202264-90-2, 4-Dibromomethylbiphenyl 220141-76-4,
     1-Dibromomethyl-2-fluorobenzene 683812-78-4,
     1-Dibromomethyl-4-ethylbenzene
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of aromatic aldehydes by oxidation of \alpha, \alpha-
        dihaloarylmethanes with sulfoxides and conversion of
        indolecarboxaldehydes into N-(indolylmethyl)alkanesulfoxamides useful
        as cytoplasmic phospholipase A2 inhibitors)
IT
     4025-75-6P, (4-Nitrophenyl) methanesulfonyl chloride
     Cyclohexylmethanesulfonyl chloride
                                          24974-73-0P, (3-
     Chlorophenyl) methanesulfonyl chloride
                                             58032-84-1P, (3-
     Nitrophenyl) methanesulfonyl chloride
                                            85952-31-4P, (2,6-
     Dichlorophenyl) methanesulfonyl chloride
                                               92614-55-6P,
     (2-Methylphenyl) methanesulfonyl chloride
                                                93749-47-4P,
     4-(2,2-Diethoxyethoxy) benzoic acid methyl ester
                                                       161448-78-8P,
     (2-Naphthyl) methanesulfonyl chloride
                                            163295-70-3P, (3,5-
     Dichlorophenyl) methanesulfonyl chloride
                                               163295-71-4P,
     (2,5-Dichlorophenyl) methanesulfonyl chloride
                                                    163295-74-7P,
     (3,5-Difluorophenyl) methanesulfonyl chloride
                                                    163295-76-9P,
     (3-Methoxyphenyl) methanesulfonyl chloride
                                                 174961-63-8P, Methyl
     3-[(chlorosulfonyl)methyl]benzoate
                                          179524-60-8P, (2,6-
     Difluorophenyl) methanesulfonyl chloride
                                               352708-56-6P,
     (3,5-Dimethylphenyl) methanesulfonyl chloride
                                                    479422-23-6P,
     4-[2-(5-Chloro-2-methylindol-3-yl)ethoxy]benzoic acid methyl ester
     479422-24-7P, 4-[2-(1-Benzhydryl-5-chloro-2-methyl-1H-indol-3-
    yl)ethoxy]benzoic acid methyl ester
                                           479422-26-9P, 4-[2-(1-Benzhydryl-5-
     chloro-2-formyl-1H-indol-3-yl)ethoxy]benzoic acid methyl ester
     540522-70-1P, 4-[3-[2-(2-Aminoethyl)-1-benzhydryl-5-chloro-1H-indol-3-
    yl]propyl]benzoic acid methyl ester 540523-00-0P, Methyl
     4-[2-[1-benzhydryl-5-chloro-2-[2-[[(2-nitrobenzyl)sulfonyl]amino]ethyl]-1H-
     indol-3-yl]ethoxy]benzoate
                                 540523-96-4P, 4-[2-[1-Benzhydryl-5-chloro-2-
     [2-[(ethenylsulfonyl)amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl
             540524-67-2P, (2,6-Dimethylphenyl) methanesulfonyl chloride
     683812-85-3P, 4-[2-[1-Benzhydryl-5-chloro-2-(2-nitroethenyl)-1H-indol-3-
    yl]ethoxy]benzoic acid methyl ester
                                           683812-86-4P, 4-[2-[1-Benzhydryl-2-
     [2-[(benzylsulfonyl)amino]ethyl]-5-chloro-1H-indol-3-yl]ethoxy]benzoic
     acid methyl ester
                        683812-87-5P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-
     [(isopropylsulfonyl)amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl
             683812-88-6P, 4-[2-[1-Benzhydryl-2-[2-[(butylsulfonyl)amino]ethyl]-
     5-chloro-1H-indol-3-yl]ethoxy]benzoic acid methyl ester
                                                               683812-89-7P,
     4-[2-[1-Benzhydryl-5-chloro-2-[2-[(1-methyl-1H-imidazol-4-
    yl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl ester
     683812-90-0P, 4-[2-[1-Benzhydryl-2-[2-[[(5-bromo-6-chloro-3-
    pyridinyl)sulfonyl]amino]ethyl]-5-chloro-1H-indol-3-yl]ethoxy]benzoic acid
    methyl ester
                   683812-91-1P
                                   683812-92-2P, 4-[2-[1-Benzhydryl-5-chloro-2-
     [2-[[[(methylsulfonyl)methyl]sulfonyl]amino]ethyl]-1H-indol-3-
    yl]ethoxy]benzoic acid methyl ester
                                           683812-93-3P, 4-[2-[1-Benzhydryl-5-
    chloro-2-[2-[[[2-(1-naphthyl)ethyl]sulfonyl]amino]ethyl]-1H-indol-3-
    yl]ethoxy]benzoic acid methyl ester
                                           683812-94-4P, 4-[2-[1-Benzhvdrvl-5-
    chloro-2-[2-[[(3,4-dichlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-
    yl]ethoxy]benzoic acid methyl ester
                                           683812-95-5P, 4-[2-[1-Benzhydryl-5-
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chloro-2-[2-[[(3,5-dichlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-
yl]ethoxy]benzoic acid methyl ester
                                      683812-96-6P, 4-[2-[1-Benzhydryl-5-
chloro-2-[2-[[[3-(trifluoromethyl)benzyl]sulfonyl]amino]ethyl]-1H-indol-3-
yl]ethoxy]benzoic acid methyl ester
                                      683812-97-7P, 4-[2-[1-Benzhydryl-5-
chloro-2-[2-[[[4-(trifluoromethyl)benzyl]sulfonyl]amino]ethyl]-1H-indol-3-
yl]ethoxy]benzoic acid methyl ester
                                      683812-98-8P, 4-[2-[1-Benzhydryl-5-
chloro-2-[2-[[(4-fluorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-
                                      683812-99-9P, 4-[2-[1-Benzhydryl-5-
yl]ethoxy]benzoic acid methyl ester
chloro-2-[2-[[(4-chlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-
yl]ethoxy]benzoic acid methyl ester
                                      683813-00-5P, 2-[2-[[(2-
Aminobenzyl) sulfonyl] amino] ethyl] -4 - [2 - (1-benzhydryl -5 - chloro - 1H - indol - 3 -
yl)ethoxy]benzoic acid methyl ester
                                      683813-01-6P, 4-[2-[1-Benzhydryl-5-
chloro-2-[2-[[(dimethylamino)sulfonyl]amino]ethyl]-1H-indol-3-
yl]ethoxy]benzoic acid methyl ester
                                      683813-02-7P, 4-[2-[1-Benzhydryl-5-
chloro-2-[2-[[(2-naphthylmethyl)sulfonyl]amino]ethyl]-1H-indol-3-
yl]ethoxy]benzoic acid methyl ester
                                      683813-03-8P, 3-[[[[2-[1-Benzhydryl-
3-[2-(4-methoxycarbonylphenoxy)ethyl]-5-chloro-1H-indol-2-
                                                           683813-04-9P,
yl]ethyl]amino]sulfonyl]methyl]benzoic acid methyl ester
4-[2-[1-Benzhydryl-5-chloro-2-[2-[[((E)-2-phenylethenyl)sulfonyl]amino]eth
yl]-1H-indol-3-yl]ethoxy]benzoic acid methyl ester
                                                     683813-05-0P,
4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(trifluoromethyl)sulfonyl]amino]ethyl]-
1H-indol-3-yl]ethoxy]benzoic acid methyl ester
                                                 683813-06-1P,
4-[2-[1-Benzhydryl-5-chloro-2-[2-[(cyclopropylsulfonyl)amino]ethyl]-1H-
indol-3-yl]ethoxy]benzoic acid methyl ester
                                              683813-07-2P,
4-[2-[1-Benzhydryl-2-[2-[[[3,5-bis(trifluoromethyl)benzyl]sulfonyl]amino]e
thyl]-5-chloro-1H-indol-3-yl]ethoxy]benzoic acid methyl ester
683813-08-3P, 2-[[[2-[1-Benzhydryl-3-[2-(4-methoxycarbonylphenoxy)ethyl]-5-
chloro-1H-indol-2-yl]ethyl]amino]sulfonyl]benzoic acid methyl ester
683813-09-4P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[(2-
naphthylsulfonyl)amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl
        683813-10-7P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(3,5-
dichlorophenyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
methyl ester
               683813-11-8P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(3,4-
dichlorophenyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
methyl ester
               683813-12-9P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(2,3-
dichlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
methyl ester
               683813-13-0P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[(2,4-
dichlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
methyl ester
               683813-14-1P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[(4-chloro-
2-nitrobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
methyl ester 683813-15-2P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(2-
cyanobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl
        683813-16-3P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(3,5-
difluorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
methyl ester
               683813-17-4P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(3-
cyanobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl
        683813-18-5P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(4-
cyanobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl
        683813-19-6P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[[4-(1-
piperidinylsulfonyl)benzyl]sulfonyl]amino]ethyl]-1H-indol-3-
yl]ethoxy]benzoic acid methyl ester
                                      683813-20-9P, 4-[2-[2-[2-[[4-
(Aminosulfonyl) benzyl] sulfonyl] amino] ethyl] -1-benzhydryl -5-chloro-1H-indol-
3-yl]ethoxy]benzoic acid methyl ester 683813-21-0P, 4-[2-[1-Benzhydryl-5-
chloro-2-[2-[[[[4-(methanesulfonyl)phenyl]methyl]sulfonyl]amino]ethyl]-1H-
indol-3-yl]ethoxy]benzoic acid methyl ester
                                              683813-22-1P,
4-[2-[1-Benzhydryl-5-chloro-2-[2-[[[[4-(diethylsulfamoyl)phenyl]methyl]sul
fonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl ester
683813-23-2P, 4-[3-(5-Chloro-2-methyl-1H-indol-3-yl)propyl]benzoic acid
methyl ester 683813-24-3P, 4-[3-(1-Benzhydryl-5-chloro-2-methyl-1H-indol-
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3-yl)propyl]benzoic acid methyl ester 683813-25-4P, 4-[3-(1-Benzhydryl-5chloro-2-formyl-1H-indol-3-yl)propyl]benzoic acid methyl ester 683813-26-5P, 4-[3-[1-Benzhydryl-5-chloro-2-(2-nitroethenyl)-1H-indol-3yl]propyl]benzoic acid methyl ester 683813-27-6P, 4-[3-[1-Benzhydryl-5chloro-2-[2-[[(phenylmethyl)sulfonyl]amino]ethyl]-1H-indol-3yl]propyl]benzoic acid methyl ester 683813-28-7P, 4-[3-[1-Benzhydryl-5chloro-2-[2-[[(3,5-dichlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3yl]propyl]benzoic acid methyl ester 683813-29-8P, 4-[3-[1-Benzhydryl-5chloro-2-[2-[[(3,4-dichlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3yl]propyl]benzoic acid methyl ester 683813-30-1P, 4-[2-[1-Benzhydryl-5chloro-2-[2-[(methylsulfonyl)amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic 683813-31-2P, 4-[2-[1-Benzhydryl-5-chloro-2-[2acid methyl ester [(phenylsulfonyl)amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl 683813-32-3P, 2-[[[2-[[[2-[1-Benzhydryl-3-[2-(4ester methoxycarbonylphenoxy)ethyl]-5-chloro-1H-indol-2yl]ethyl]amino]sulfonyl]ethyl]amino]carbonyl]benzoic acid methyl ester 683813-33-4P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(3pyridinylmethyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl ester 683813-34-5P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(4pyridinylmethyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid 683813-35-6P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(2methyl ester pyridinylmethyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl ester 683813-36-7P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(2,6dimethylbenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid 683813-37-8P, 4-[2-[1-Benzhydryl-5-chloro-2-[2methyl ester [[(cyclohexylmethyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl ester 683813-38-9P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(4nitrobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl 683813-39-0P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(3nitrobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl 683813-40-3P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(2nitrobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid methyl 683813-41-4P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(4fluorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid 683813-42-5P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[[4methyl ester (trifluoromethyl)benzyl]sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic 683813-43-6P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[[3acid methyl ester (trifluoromethyl)benzyl]sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic 683813-44-7P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(4acid methyl ester chlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid 683813-45-8P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(2methyl ester pyridinylmethyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid methyl ester 683813-46-9P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(3pyridinylmethyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid 683813-47-0P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(4methyl ester pyridinylmethyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid 683813-48-1P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(2methyl ester chlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid 683813-49-2P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(3methyl ester nitrobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid methyl 683813-50-5P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(3chlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid 683813-51-6P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(2,5methyl ester dichlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid methyl ester 683813-52-7P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(3methoxybenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid methyl ester 683813-53-8P, 4-[3-[2-[[(2-Aminobenzyl)sulfonyl]amino]et hyl]-1-benzĥydryl-5-chloro-1H-indol-3-yl]propyl]benzoic acid methyl ester 683813-54-9P, 4-[3-[1-Benzhydryl-5-chloro-2-[2-[[(2-

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methylbenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]propyl]benzoic acid
               683813-55-0P, [4-(Trifluoromethoxy)phenyl]methanesulfonyl
methyl ester
           683813-56-1P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(4-
chloride
trifluoromethoxybenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic
                    683813-57-2P, (4-Fluoro-6-nitrophenyl) methanesulfonyl
acid methyl ester
chloride
           683813-58-3P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(2-fluoro-6-
nitrobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl
        683813-59-4P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(2,6-
difluorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
               683813-60-7P, (6-Chloro-3-pyridyl) methanesulfonyl chloride
683813-61-8P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[[(6-chloro-3-
pyridinyl)methyl]sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
methyl ester
               683813-62-9P, (5,6-Dichloro-3-pyridyl) methanesulfonyl
chloride
           683813-63-0P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[[(5,6-dichloro-
3-pyridinyl)methyl]sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
methyl ester
               683813-64-1P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(3-
methoxybenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
methyl ester
               683813-65-2P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(3,5-
dimethylbenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
               683813-66-3P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(2-
methyl ester
methylbenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
methyl ester
               683813-67-4P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[(2,6-
dichlorobenzyl)sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid
               683813-68-5P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-
methyl ester
[[[(phenylsulfanyl)methyl]sulfonyl]amino]ethyl]-1H-indol-3-
                                      683813-69-6P, 4-[2-[1-Benzhydryl-5-
yl]ethoxy]benzoic acid methyl ester
chloro-2-[2-[[[[(2,6-dimethylphenyl)sulfanyl]methyl]sulfonyl]amino]ethyl]-
1H-indol-3-yl]ethoxy]benzoic acid methyl ester
                                                 683813-70-9P,
4-[2-[1-Benzhydryl-5-chloro-2-[2-[[[[(2-methoxyphenyl)sulfanyl]methyl]sulf
onyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl ester
683813-71-0P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[[[(2-chloro-6-
methylphenyl)sulfanyl]methyl]sulfonyl]amino]ethyl]-1H-indol-3-
yl]ethoxy]benzoic acid methyl ester
                                      683813-72-1P, 4-[2-[1-Benzhydryl-5-
chloro-2-[2-[[[[(3,5-dichlorophenyl)sulfanyl]methyl]sulfonyl]amino]ethyl]-
1H-indol-3-yl]ethoxy]benzoic acid methyl ester
                                                683813-73-2P,
4-[2-[1-Benzhydryl-5-chloro-2-[2-[[[[(3,4-dimethoxyphenyl)sulfanyl]methyl]
sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl ester
683813-74-3P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[[2-(pyrazol-1-
yl)ethyl]sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl
ester 683813-75-4P, 4-[2-(1-Benzhydryl-5-chloro-2-
(dibromomethyl)-1H-indol-3-yl)ethoxy]benzoic acid methyl ester
683813-76-5P, 4-[2-[1-Benzhydryl-5-chloro-2-[2-[[[2-(morpholin-4-
yl)ethyl]sulfonyl]amino]ethyl]-1H-indol-3-yl]ethoxy]benzoic acid methyl
ester
RL: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
   (preparation of aromatic aldehydes by oxidation of \alpha,\alpha-
   dihaloarylmethanes with sulfoxides and conversion of
   indolecarboxaldehydes into N-(indolylmethyl)alkanesulfoxamides useful
   as cytoplasmic phospholipase A2 inhibitors)
100-52-7P, Benzaldehyde, preparation 104-88-1P,
4-Chlorobenzaldehyde, preparation 446-52-6P,
2-Fluorobenzaldehyde 456-48-4P, 3-Fluorobenzaldehyde
459-57-4P, 4-Fluorobenzaldehyde 587-04-2P,
3-Chlorobenzaldehyde 3132-99-8P, 3-Bromobenzaldehyde
3218-36-8P, 4-Biphenylcarboxaldehyde
                                       4748-78-1P,
4-Ethylbenzaldehyde
                      6287-86-1P, 4-Formylbenzoic acid ethyl ester
RL: SPN (Synthetic preparation); PREP (Preparation)
   (preparation of aromatic aldehydes by oxidation of \alpha, \alpha-
```

IT

dihaloarylmethanes with sulfoxides and conversion of indolecarboxaldehydes into N-(indolylmethyl)alkanesulfoxamides useful as cytoplasmic phospholipase A2 inhibitors) IT 67-68-5, DMSO, reactions 98-87-3, (Dichloromethyl) benzene 320-65-0, 1-Dichloromethyl-2fluorobenzene 402-64-2, 1-(Dichloromethyl)-3-fluorobenzene **455-34-5**, 1-Dibromomethyl-3-fluorobenzene **618-31-5**, (Dibromomethyl) benzene 6425-24-7, 1-Dibromomethyl-4fluorobenzene 26496-95-7, 4-Dibromomethylbenzoic acid ethyl ester 62037-06-3, 1-Dibromomethyl-4-chlorobenzene 62247-78-3, 1-Dibromomethyl-3-bromobenzene 70288-97-0, 1-Dibromomethyl-3-chlorobenzene 202264-90-2, 4-Dibromomethylbiphenyl 220141-76-4, 1-Dibromomethyl-2fluorobenzene 683812-78-4, 1-Dibromomethyl-4-ethylbenzene RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of aromatic aldehydes by oxidation of α, α dihaloarylmethanes with sulfoxides and conversion of indolecarboxaldehydes into N-(indolylmethyl)alkanesulfoxamides useful as cytoplasmic phospholipase A2 inhibitors) RN67-68-5 HCAPLUS CNMethane, sulfinylbis- (9CI) (CA INDEX NAME) H3C-S - CH 3 RN 98-87-3 HCAPLUS CN Benzene, (dichloromethyl) - (9CI) (CA INDEX NAME) Cl Cl-CH-Ph RN 320-65-0 HCAPLUS CN Benzene, 1-(dichloromethyl)-2-fluoro- (9CI) (CA INDEX NAME) CHCl₂ 402-64-2 HCAPLUS Benzene, 1-(dichloromethyl)-3-fluoro- (9CI) (CA INDEX NAME)

(CA INDEX NAME)

455-34-5 HCAPLUS

Benzene, 1-(dibromomethyl)-3-fluoro- (9CI)

RN

CN

RN 618-31-5 HCAPLUS

CN Benzene, (dibromomethyl) - (9CI) (CA INDEX NAME)

Br | Br-CH-Ph

RN 6425-24-7 HCAPLUS

CN Benzene, 1-(dibromomethyl)-4-fluoro- (9CI) (CA INDEX NAME)

RN 26496-95-7 HCAPLUS

CN Benzoic acid, 4-(dibromomethyl)-, ethyl ester (9CI) (CA INDEX NAME)

Br₂CH

RN 62037-06-3 HCAPLUS

CN Benzene, 1-chloro-4-(dibromomethyl)- (9CI) (CA INDEX NAME)

RN 62247-78-3 HCAPLUS

CN Benzene, 1-bromo-3-(dibromomethyl)- (9CI) (CA INDEX NAME)

RN 70288-97-0 HCAPLUS

CN Benzene, 1-chloro-3-(dibromomethyl)- (9CI) (CA INDEX NAME)

RN 202264-90-2 HCAPLUS

CN 1,1'-Biphenyl, 4-(dibromomethyl)- (9CI) (CA INDEX NAME)

RN 220141-76-4 HCAPLUS

CN Benzene, 1-(dibromomethyl)-2-fluoro- (9CI) (CA INDEX NAME)

RN 683812-78-4 HCAPLUS

CN Benzene, 1-(dibromomethyl)-4-ethyl- (9CI) (CA INDEX NAME)

IT 683813-75-4P, 4-[2-(1-Benzhydryl-5-chloro-2-(dibromomethyl)-1H-

indol-3-yl)ethoxy]benzoic acid methyl ester

RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(preparation of aromatic aldehydes by oxidation of α, α -

dihaloarylmethanes with sulfoxides and conversion of

indolecarboxaldehydes into N-(indolylmethyl)alkanesulfoxamides useful

as cytoplasmic phospholipase A2 inhibitors)

RN 683813-75-4 HCAPLUS

CN Benzoic acid, 4-[2-[5-chloro-2-(dibromomethyl)-1-(diphenylmethyl)-1H-indol-3-yl]ethoxy]-, methyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{CHPh}_2 & \text{O} \\ \text{N} & \text{CHBr}_2 \\ \text{CH}_2\text{--} \text{CH}_2\text{--} \text{O} \end{array}$$

100-52-7P, Benzaldehyde, preparation 104-88-1P, IT 4-Chlorobenzaldehyde, preparation 446-52-6P, 2-Fluorobenzaldehyde 456-48-4P, 3-Fluorobenzaldehyde 459-57-4P, 4-Fluorobenzaldehyde 587-04-2P, 3-Chlorobenzaldehyde 3132-99-8P, 3-Bromobenzaldehyde 3218-36-8P, 4-Biphenylcarboxaldehyde RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of aromatic aldehydes by oxidation of α, α dihaloarylmethanes with sulfoxides and conversion of indolecarboxaldehydes into N-(indolylmethyl)alkanesulfoxamides useful as cytoplasmic phospholipase A2 inhibitors) 100-52-7 HCAPLUS RNCNBenzaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 104-88-1 HCAPLUS CN Benzaldehyde, 4-chloro- (9CI) (CA INDEX NAME)

RN 446-52-6 HCAPLUS CN Benzaldehyde, 2-fluoro- (9CI) (CA INDEX NAME)

RN 456-48-4 HCAPLUS CN Benzaldehyde, 3-fluoro- (9CI) (CA INDEX NAME)

RN 459-57-4 HCAPLUS

CN Benzaldehyde, 4-fluoro- (9CI) (CA INDEX NAME)

RN 587-04-2 HCAPLUS

CN Benzaldehyde, 3-chloro- (9CI) (CA INDEX NAME)

RN 3132-99-8 HCAPLUS

CN Benzaldehyde, 3-bromo- (9CI) (CA INDEX NAME)

RN 3218-36-8 HCAPLUS

CN [1,1'-Biphenyl]-4-carboxaldehyde (9CI) (CA INDEX NAME)

L27 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

2004:40052 HCAPLUS

DOCUMENT NUMBER:

140:423430

TITLE:

Oxygen transfer from sulfoxide. Formation of aromatic

aldehydes from dihalomethylarenes

AUTHOR(S):

Li, Wei; Li, Jianchang; DeVincentis, Dianne; Mansour,

Tarek S.

CORPORATE SOURCE:

Chemical and Screening Sciences, Wyeth Research,

Cambridge, MA, 02140, USA

SOURCE:

Tetrahedron Letters (2004), 45(5), 1071-1074

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER:

Elsevier Science B.V.

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB The conversion of dihalomethylarenes to the corresponding aldehydes is accomplished conveniently by using sulfoxides as the oxygen donor under neutral conditions.

```
25-15 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
CC
     Aldehydes, preparation
IT
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (aromatic; preparation of aromatic aldehydes from dihalomethylarenes by
oxygen
        transfer from sulfoxide)
     67-68-5, DMSO, reactions 98-87-3, Benzal chloride
IT
     320-65-0, o-Fluorobenzal chloride 402-64-2,
     m-Fluorobenzal chloride 455-34-5, 3-Fluorobenzal bromide
     535-15-9, Ethyl dichloroacetate 618-31-5, Benzal bromide
     2648-61-5, 2,2-Dichloroacetophenone 6425-24-7
     26496-95-7, Ethyl 4-dibromomethylbenzoate 30263-65-1
     62037-06-3, 4-Chlorobenzal bromide 62247-78-3,
     3-Bromobenzal bromide 70288-97-0, 3-Chlorobenzal bromide
     202264-90-2 220141-76-4
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of aromatic aldehydes from dihalomethylarenes by oxygen
transfer
        from sulfoxide)
     100-52-7P, Benzaldehyde, preparation 104-88-1P,
TT
     p-Chlorobenzaldehyde, preparation 446-52-6P,
     o-Fluorobenzaldehyde 456-48-4P, m-Fluorobenzaldehyde
     459-57-4P, p-Fluorobenzaldehyde 587-04-2P,
     3-Chlorobenzaldehyde 924-44-7P 1074-12-0P
     3132-99-8P, m-Bromobenzaldehyde 3218-36-8P,
     p-Biphenylaldehyde
                         4480-47-1P
                                       6287-86-1P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of aromatic aldehydes from dihalomethylarenes by oxygen
transfer
        from sulfoxide)
     67-68-5, DMSO, reactions 98-87-3, Benzal chloride
IT
     320-65-0, o-Fluorobenzal chloride 402-64-2,
     m-Fluorobenzal chloride 455-34-5, 3-Fluorobenzal bromide
     535-15-9, Ethyl dichloroacetate 618-31-5, Benzal bromide
     2648-61-5, 2,2-Dichloroacetophenone 6425-24-7
     26496-95-7, Ethyl 4-dibromomethylbenzoate 30263-65-1
     62037-06-3, 4-Chlorobenzal bromide 62247-78-3,
     3-Bromobenzal bromide 70288-97-0, 3-Chlorobenzal bromide
     202264-90-2 220141-76-4
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of aromatic aldehydes from dihalomethylarenes by oxygen
transfer
        from sulfoxide)
RN
     67-68-5 HCAPLUS
     Methane, sulfinylbis- (9CI) (CA INDEX NAME)
CN
H_3C-S-CH_3
     98-87-3 HCAPLUS
RN
CN
     Benzene, (dichloromethyl) - (9CI) (CA INDEX NAME)
   Cl
Cl-CH-Ph
```

RN 320-65-0 HCAPLUS

CN Benzene, 1-(dichloromethyl)-2-fluoro- (9CI) (CA INDEX NAME)

RN 402-64-2 HCAPLUS

CN Benzene, 1-(dichloromethyl)-3-fluoro- (9CI) (CA INDEX NAME)

RN 455-34-5 HCAPLUS

CN Benzene, 1-(dibromomethyl)-3-fluoro- (9CI) (CA INDEX NAME)

RN 535-15-9 HCAPLUS

CN Acetic acid, dichloro-, ethyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

RN 618-31-5 HCAPLUS

CN Benzene, (dibromomethyl) - (9CI) (CA INDEX NAME)

RN 2648-61-5 HCAPLUS

CN Ethanone, 2,2-dichloro-1-phenyl- (9CI) (CA INDEX NAME)

RN 6425-24-7 HCAPLUS

CN Benzene, 1-(dibromomethyl)-4-fluoro- (9CI) (CA INDEX NAME)

RN 26496-95-7 HCAPLUS

CN Benzoic acid, 4-(dibromomethyl)-, ethyl ester (9CI) (CA INDEX NAME)

RN 30263-65-1 HCAPLUS

CN 2-Butanone, 1,1-dibromo-3,3-dimethyl- (8CI, 9CI) (CA INDEX NAME)

RN 62037-06-3 HCAPLUS

CN Benzene, 1-chloro-4-(dibromomethyl) - (9CI) (CA INDEX NAME)

RN 62247-78-3 HCAPLUS

CN Benzene, 1-bromo-3-(dibromomethyl)- (9CI) (CA INDEX NAME)

RN 70288-97-0 HCAPLUS

CN Benzene, 1-chloro-3-(dibromomethyl)- (9CI) (CA INDEX NAME)

RN 202264-90-2 HCAPLUS

CN 1,1'-Biphenyl, 4-(dibromomethyl)- (9CI) (CA INDEX NAME)

RN 220141-76-4 HCAPLUS

CN Benzene, 1-(dibromomethyl)-2-fluoro- (9CI) (CA INDEX NAME)

IT 100-52-7P, Benzaldehyde, preparation 104-88-1P,

p-Chlorobenzaldehyde, preparation 446-52-6P,

o-Fluorobenzaldehyde 456-48-4P, m-Fluorobenzaldehyde

459-57-4P, p-Fluorobenzaldehyde 587-04-2P,

3-Chlorobenzaldehyde 924-44-7P 1074-12-0P

3132-99-8P, m-Bromobenzaldehyde 3218-36-8P,

p-Biphenylaldehyde

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of aromatic aldehydes from dihalomethylarenes by oxygen

transfer

from sulfoxide)

RN 100-52-7 HCAPLUS.

CN Benzaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 104-88-1 HCAPLUS

CN Benzaldehyde, 4-chloro- (9CI) (CA INDEX NAME)

RN 446-52-6 HCAPLUS

CN Benzaldehyde, 2-fluoro- (9CI) (CA INDEX NAME)

RN 456-48-4 HCAPLUS

CN Benzaldehyde, 3-fluoro- (9CI) (CA INDEX NAME)

RN 459-57-4 HCAPLUS

CN Benzaldehyde, 4-fluoro- (9CI) (CA INDEX NAME)

RN 587-04-2 HCAPLUS

CN Benzaldehyde, 3-chloro- (9CI) (CA INDEX NAME)

RN 924-44-7 HCAPLUS

CN Acetic acid, oxo-, ethyl ester (9CI) (CA INDEX NAME)

RN 1074-12-0 HCAPLUS

CN Benzeneacetaldehyde, α -oxo- (9CI) (CA INDEX NAME)

RN 3132-99-8 HCAPLUS

CN Benzaldehyde, 3-bromo- (9CI) (CA INDEX NAME)

3218-36-8 HCAPLUS RN

[1,1'-Biphenyl]-4-carboxaldehyde (9CI) (CA INDEX NAME) CN

THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS REFERENCE COUNT: 48

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

1991:513736 HCAPLUS ACCESSION NUMBER:

115:113736 DOCUMENT NUMBER:

Condensation reaction of N-TITLE:

sulfinylperfluoroalkanesulfonamides

Zhu, Shizheng; Chen, Qingyun AUTHOR(S):

CORPORATE SOURCE: Shanghai Inst. Org. Chem., Acad. Sin., Shanghai,

200032, Peop. Rep. China

Journal of the Chemical Society, Chemical SOURCE:

> Communications (1991), (10), 732-3 CODEN: JCCCAT; ISSN: 0022-4936

Journal DOCUMENT TYPE: English LANGUAGE:

CASREACT 115:113736 OTHER SOURCE(S):

N-Sulfinylperfluoroalkanesulfonamides, RfSO2NSO, which are prepared by refluxing perfluoroalkanesulfonamides with SOCl2, react easily with aldehydes, ketones, sulfoxides, and POC13 to yield a series of new compds. RfSO2N:Y [Y = PhCH, cyclohexylidene, R1R2S [R1 = R2 = Me; R1R2 = (CH2)4, PCl3] with elimination of SO2.

CC 21-2 (General Organic Chemistry)

IT 135705-80-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(condensation reaction of, with carbonyl compds., sulfoxides, or phosphorus oxychloride)

67-68-5P, Dimethyl sulfoxide, preparation 100-52-7P, IT

108-93-0P, Cyclohexanol, reactions Benzaldehyde, reactions 10025-87-3P, Phosphorus oxychloride

RL: RCT (Reactant); PREP (Preparation); RACT

(Reactant or reagent)

(condensation reaction of, with N-sulfinylperfluoroalkenesulfonamide)

TТ 135705-80-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(condensation reaction of, with carbonyl compds., sulfoxides, or phosphorus oxychloride)

RN 135705-80-5 HCAPLUS

Ethanesulfonamide, 1,1,2,2-tetrafluoro-N-sulfinyl-2-(1,1,2,2-CN tetrafluoroethoxy) - (9CI) (CA INDEX NAME)

$$0 = S = N - S - CF_2 - CF_2 - O - CF_2 - CHF_2$$

$$0$$

$$0$$

IT 67-68-5P, Dimethyl sulfoxide, preparation 100-52-7P,

Benzaldehyde, reactions

RL: RCT (Reactant); PREP (Preparation); RACT

(Reactant or reagent)

(condensation reaction of, with N-sulfinylperfluoroalkenesulfonamide)

RN 67-68-5 HCAPLUS

CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)

RN 100-52-7 HCAPLUS

CN Benzaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)

L27 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:35271 HCAPLUS

DOCUMENT NUMBER: 112:35271

TITLE: Generation and reactions of novel copper carbenoids

through a stoichiometric reaction of copper metal with

gem-dichlorides in dimethyl sulfoxide

AUTHOR(S): Tezuka, Yasuyuki; Hashimoto, Akio; Ushizaka, Koh;

Imai, Kiyokazu

Journal

CORPORATE SOURCE: Dep. Mater. Sci. Technol., Nagaoka Univ. Technol.,

Nagaoka, 940-21, Japan

SOURCE: Journal of Organic Chemistry (1990), 55(1), 329-33

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE:

LANGUAGE: English

OTHER SOURCE(S): CASREACT 112:35271

Copper metal and such gem-dichlorides as α, α -dichloro acid esters X2CRCO2R1 (I; X = Cl, Br; R = H, Me; R1 = alkyl, Ph), Ph2Cl2 (II), PhCHCl2 (III), MeCOCHCl2 (IV), MeCH:CHCHCl2 (V), and CCl4 (VI) were found to undergo a stoichiometric reaction in DMSO under mild conditions to produce copper carbenoid intermediates via α, α -elimination of dichlorides, along with the formation of CuCl2(DMSO)2. Thus, I and II gave substituted olefins via a carbenoid coupling reaction. From V and VI, reaction products were produced via oxygen abstraction from DMSO, together with Me2S; III and IV were found to cause both types of reactions. The carbenoid intermediate formed from I did not cause cyclopropanation reaction with cyclohexene in contrast to the conventional carbalkoxy carbenoid generated by a decomposition reaction of ethyl

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diazoacetate. Also, the carbenoid coupling reaction was completely
     inhibited by the addition of triphenylphosphine, which contrasts to the
     formation of phosphonium ylide with a carbenoid from Et diazoacetate.
CC
     23-17 (Aliphatic Compounds)
     100-52-7P, Benzaldehyde, preparation
IT
     RL: FORM (Formation, nonpreparative); PREP (Preparation)
        (formation of, in reaction of benzal chloride with copper metal)
IT
     4170-30-3P, 2-Butenal
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, by reaction of dichlorobutene with copper metal)
     56-23-5, Carbon tetrachloride, reactions 98-87-3, Benzal
     chloride 116-54-1 513-88-2 535-15-9
     2051-90-3, Dichlorodiphenyl methane 6482-26-4, Methyl
     dibromoacetate 10565-20-5
                                17640-03-8 49653-47-6
     56800-09-0, 1,1-Dichloro-2-butene
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with copper metal)
IT
     67-68-5, DMSO, reactions
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (solvent, for reaction of copper metal with gem-dichlorides)
     100-52-7P, Benzaldehyde, preparation
IT
     RL: FORM (Formation, nonpreparative); PREP (Preparation)
        (formation of, in reaction of benzal chloride with copper metal)
     100-52-7 HCAPLUS
RN
     Benzaldehyde (7CI, 8CI, 9CI)
                                   (CA INDEX NAME)
       CH = 0
IT
     4170-30-3P, 2-Butenal
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of, by reaction of dichlorobutene with copper metal)
     4170-30-3 HCAPLUS
RN
     2-Butenal (9CI)
                      (CA INDEX NAME)
CN
H3C-CH-CH-CH-O
     98-87-3, Benzal chloride 116-54-1 513-88-2
     535-15-9 6482-26-4, Methyl dibromoacetate
     10565-20-5 49653-47-6 56800-09-0,
     1,1-Dichloro-2-butene
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with copper metal)
RN
     98-87-3 HCAPLUS
     Benzene, (dichloromethyl) - (9CI) (CA INDEX NAME)
   Cl
```

Cl-CH-Ph

116-54-1 HCAPLUS

RN

CN Acetic acid, dichloro-, methyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O || MeO-C-CHCl2

RN 513-88-2 HCAPLUS

CN 2-Propanone, 1,1-dichloro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

0 || Me- C- CHCl₂

RN 535-15-9 HCAPLUS

CN Acetic acid, dichloro-, ethyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

O || EtO-C-CHCl₂

RN 6482-26-4 HCAPLUS

CN Acetic acid, dibromo-, methyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

0 || MeO-C-CHBr₂

RN 10565-20-5 HCAPLUS

CN Acetic acid, dichloro-, phenyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

PhO-C-CHCl₂

RN 49653-47-6 HCAPLUS

CN Acetic acid, dichloro-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

t-BuO-C-CHCl₂

RN 56800-09-0 HCAPLUS

CN 2-Butene, 1,1-dichloro- (9CI) (CA INDEX NAME)

Cl₂CH-CH-CH-Me

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IT
     67-68-5, DMSO, reactions
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (solvent, for reaction of copper metal with gem-dichlorides)
RN
     67-68-5 HCAPLUS
     Methane, sulfinylbis- (9CI) (CA INDEX NAME)
CN
H3C-S-CH3
L27 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:
                         1977:43362 HCAPLUS
DOCUMENT NUMBER:
                         86:43362
                         Study of the reaction of dimethyl sulfoxide with
TITLE:
                         bromo- and dibromomethyl aryl ketones
                         Saldabols, N.; Cimanis, A.; Hillers, S.
AUTHOR(S):
                         Inst. Org. Sint., Riga, USSR
CORPORATE SOURCE:
                         Tezisy Dokl. Nauchn. Sess. Khim. Tekhnol. Org. Soedin.
SOURCE:
                         Sery Sernistykh Neftei, 13th (1974), 188. Editor(s):
                         Gal'pern, G. D. "Zinatne": Riga, USSR.
                         CODEN: 33SUAA
DOCUMENT TYPE:
                         Conference
LANGUAGE:
                         Russian
     Oxidation of BrCH2COR (R = aryl) with Me2SO gave RCOCHO and RCOCO2Me.
     Reaction of Br2CHCOR with Me2SO gave an intermediate arylmethoxysulfonium
     salt, which was easily decomposed to give Me2S and RCOCOBr; MeSO3H and Me3S+
     Br- were also isolated from the reaction mixture
     25-17 (Noncondensed Aromatic Compounds)
CC
     70-11-1 13665-04-8
IT
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (oxidation of, with dimethyl sulfoxide)
     1074-12-0DP, derivs.
                            15206-55-0DP, derivs.
IT
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
IT
     67-68-5, reactions
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (with bromo-and dibromomethyl aryl ketones)
IT
     13665-04-8
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (oxidation of, with dimethyl sulfoxide)
     13665-04-8 HCAPLUS
RN
CN
     Ethanone, 2,2-dibromo-1-phenyl- (9CI)
                                           (CA INDEX NAME)
Ph-C-CHBr2
IT
     1074-12-0DP, derivs.
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
RN
     1074-12-0 HCAPLUS
```

Benzeneacetaldehyde, α -oxo- (9CI) (CA INDEX NAME)

CN

IT **67-68-5**, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(with bromo-and dibromomethyl aryl ketones)

RN

67-68-5 HCAPLUS Methane, sulfinylbis- (9CI) (CA INDEX NAME) CN

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